We Claim:

1. A method for fabricating ferroelectric memory cells in accordance with the stacked principle, which comprises the steps of:

providing a conductive plug formed of polysilicon;

forming a bonding layer directly above the conductive plug and between a lower capacitor electrode of a ferroelectric storage capacitor and the conductive plug, the conductive plug being formed beneath the ferroelectric storage capacitor and electrically connecting the lower capacitor electrode to a transistor electrode of a selection transistor formed one of in and on a semiconductor wafer;

forming an oxygen diffusion barrier above the bonding layer; and

performing a rapid thermal process (RTP) step in an oxygen atmosphere, after a ferroelectric deposition and before a ferro anneal has been formed, the RTP step including the steps of:

determining an oxygen rate of the bonding layer and a first diffusion coefficient (D_{oxygen}) of oxygen in a

material of the bonding layer in dependence on temperature;

determining a second diffusion coefficient ($D_{silicon}$) of silicon in the material of the bonding layer in dependence on the temperature; and

calculating an optimum temperature range for the RTP step from the first and second diffusion coefficients (D_{oxygen} and $D_{silicon}$) for a predetermined layer thickness and a layer width of a layer system formed of the bonding layer and the oxygen diffusion barrier from the relationship

$$\frac{(d_{BARR})^2}{D_{silicon}} < \frac{(b_{BARR})^2}{D_{oxygen}}$$

in which the left-hand term denotes a period of time required for full siliciding of the bonding layer, and the right-hand term denotes a period of time required to fully oxidize the bonding layer,

d_{BARR} denotes the predetermined layer thickness of the layer system formed of the bonding layer and the oxygen diffusion barrier,

b_{BARR} denotes half the layer width of the layer system containing the bonding layer and the oxygen diffusion

barrier, so that during the RTP step siliciding of the bonding layer takes place more quickly than its oxidation.

2. The method according to claim 1, which further comprises forming the bonding layer, due to the RTP step, to contain a lower layer made from $TiSi_2$ and an upper layer made from Ti and disposed directly above the lower layer.

3. The method according to claim 2, which further comprises forming the oxygen diffusion barrier, prior to the RTP step, to contain a diffusion lower layer made of Ir lying directly above the upper layer of the bonding layer, and a diffusion upper layer of IrO_2 directly covering the diffusion lower layer of the oxygen diffusion barrier.